## REMARKS

In response to the Office Action mailed October 12, 2007, Applicant respectfully requests reconsideration. To further the prosecution of this application, each of the rejections set forth in the Office Action has been carefully considered and is addressed below. The application as presented is believed to be in condition for allowance.

Initially, Applicant thanks Examiner Vu for the courtesies extended during the telephone interview with Applicant's representative, Scott J. Gerwin, on March 31, 2008. The substance of the interview is summarized herein.

The Office Action rejects claims 96-107 and 110-113 under 35 U.S.C. §103(a) as purportedly being obvious over Kim ("Design of Software Systems Based On Axiomatic Design"), in view of Talbott (5,375,440). Applicant respectfully traverses this rejection.

### Claims 96 and 105

Each of claims 96 and 105, as amended, recites "using the design matrix to define an object-oriented structure of the software system, wherein at least one functional requirement in the hierarchy of functional requirements represents a software object of the software system, and wherein at least one design parameter in the hierarchy of design parameters represents an attribute of the software object."

One example of using the design matrix to define an object-oriented structure of the software system wherein a function requirement represents a software object and a design parameter represents an attribute of the software object is described in Applicant's specification at pages 31-33. As shown in Table 2, on page 33, FR11 may represent a second level object (i.e., Object 11) and DP11 may represent an attribute of that object. Likewise, FR12 may represent a different second level object and DP12 may represent an attribute of that object.

It should be appreciated that the foregoing example is provided merely to assist the Examiner in appreciating various aspects of the present invention. However, not all of the description provided above necessarily applies to each of the independent claims pending in the application. Therefore, the Examiner is requested to not rely upon this example in interpreting any of the claims or in determining whether they patentably distinguish over the prior art of record, but

rather is requested to rely only upon the language of the claims themselves and the arguments specifically related thereto provided below.

Neither Kim nor Talbott discloses using a design matrix to define an object-oriented structure of the software system, wherein at least one functional requirement in the hierarchy of functional requirements represents a software object of the software system, and wherein at least one design parameter in the hierarchy of design parameters represents an attribute of the software object.

The Office Action asserts that Kim discloses that at least one functional requirement in the hierarchy of functional requirements represents a software object of the software system at page 246, asserting "methods to implement the needs of library software system reads on software object modules." Applicant respectfully disagrees.

The cited portion of Kim states, "[c]onsider a library software system, the task of which is to assign a call number to a new incoming book, update the keyword database, and process a search query without missing any single book which relevant to the query." That is, this portion of Kim discusses software to be used in a library for cataloging books and processing search queries for books. Kim discloses that two functional requirements for such a software system are: (1)generating a call number and keyword database for each new incoming book and (2) providing a list of references upon a search query using subject keywords.

While this portion of Kim discloses that functional requirements may be used to describe the functionality that the software is desired perform, nowhere does Kim disclose that such functional requirements may be implemented as a software object in an object-oriented system.

The Office Action also cites Figures 7 and 8 on page 249 of Kim and equation 13 of on page 253 of Kim. Figure 7 is a module-junction structure diagram, Figure 8 is a data-flow diagram derived from the module-junction structure diagram of Figure 7, and equation 13 is an uncoupled design matrix. Nowhere does Figure 7, Figure 8, or equation 13 disclose anything to using a functional requirement to represent a software object in an object-oriented software system.

Indeed, with Applicant's response mailed July 14th, 2006, Applicant submitted a declaration, under 37 C.F.R. §1.132, from Dr. Sang-Gook Kim, the principal author of Kim, the above-discussed reference titled "Design of Software Systems Based On Axiomatic Design."

In his declaration, Dr. Kim states, "I do not believe that the teachings in Kim (the journal article that I co-authored) would have, at the time of filing of the above-identified application, suggested to a person of ordinary skill in the art that a design matrix (of the type disclosed in Kim) may be used to define any object-oriented structure of a software system (Kim Declaration, ¶5)." Dr. Kim's declaration also states, "I do not believe that Kim discloses or suggests implementing a functional requirement as an object-oriented class or package."

Kim also fails to disclose or suggest that, "at least one design parameter in the hierarchy of design parameters represents an attribute of the software object," as recited in claims 96 and 105.

Prior to the amendment made herein, this limitation recited, "at least one design parameter in the hierarchy of design parameters represents an input to the software object." During the telephone interview, Applicant's representative asked the Examiner where he believed this limitation to be disclosed in the cited references. While the Examiner did not identify a specific place in either reference that explicitly discloses this limitation, the Examiner explained that he was construing a design parameter representing an input to a software object broadly to essentially read on defining design parameter satisfies a functional requirement.

While Applicant disagrees that a design parameter that represents an input to a software object reads on defining a design parameter that satisfies a functional requirement, Applicant has amended claims 96 and 105 to recite that the design parameter represents an attribute of the software object. Kim entirely fails to disclose or suggest that a design parameter may represent an attribute of a software object.

Talbott fails to cure this infirmities of Kim. During the telephone interview, Applicant's representative asked the Examiner what limitations Talbott was being relied on to show, as the Office Action appears to assert that Kim discloses each limitation of claims 96 and 105. The Examiner explained that he believes that Kim does not explicitly disclose that the design matrix can be used to design object-oriented software, but he thinks that Talbott discloses using a CASE too to design object-oriented software.

While Applicant does not deny that CASE tools used in designing object-oriented software were known in the prior art, Applicant is unaware of any tool or system for defining an object-oriented structure of a software system in the manner recited in claims 96 and 105 (i.e., using a

design matrix that maps design parameters to functional requirements, wherein at least one functional requirement in the hierarchy of functional requirements represents a software object of the software system, and wherein at least one design parameter in the hierarchy of design parameters represents an attribute of the software object").

As should be appreciated from the discussion above, each of claims 96 and 105 patentably distinguishes over Kim and Talbott, whether taken alone or in combination. Accordingly, it is respectfully requested that the rejection of these claims be withdrawn.

Claims 97-104 depend from claim 96 and claims 107 and 110-113 depend from claim 105. Each of these dependent claims patentably distinguishes over the cited references for at least the reasons discussed above in connection with its respective independent claim, and it is respectfully requested that the rejections of these claims be withdrawn.

Some additional limitations recited in certain of these dependent claims are discussed below in more detail. For the sake of brevity, not every dependent claim is discussed, and the omission of discussion of certain dependent claims is not an indication or admission that the limitations recited therein are believed to be disclosed in the prior art.

**Claims 97 and 106**

Claims 97 and 106 each recites that the product of at least one element of the design matrix and the at least one design parameter represents an operation performed by the software object. Neither Kim nor Talbott discloses or suggests this limitation.

The Office Action asserts that Kim discloses this limitations in equations 7-12 on pages 246-248 and 250-251. Applicant respectfully disagrees.

Equations 7-12 each depict design matrices. These design matrices indicate which design parameters satisfy certain functional requirements. These design matrices do not say anything about an operation performed by a software object, or that an operation may be represented by the product of at least one element of the design matrix and the at least one design parameter.

Thus, claims 97 and 106 each patentably distinguishes over Kim and Talbott, whether taken alone or in combination. Accordingly, it is respectfully requested that the rejection of these claims be withdrawn

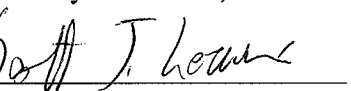
## CONCLUSION

A Notice of Allowance is respectfully requested. The Examiner is requested to call the undersigned at the telephone number listed below if this communication does not place the case in condition for allowance.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

Dated: April 11, 2008

Respectfully submitted,

By 

Scott J. Gerwin
Registration No.: 57,866
WOLF, GREENFIELD & SACKS, P.C.
Federal Reserve Plaza
600 Atlantic Avenue
Boston, Massachusetts 02210-2206
(617) 646-8000